

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Bertrand LION et al. ) Group Art Unit: 1713  
Application No : 10/670,478 ) Examiner: H. PEZZUTO  
Filed: September 26, 2003 )  
For: NOVEL BLOCK POLYMERS AND ) Confirmation No.: 7403  
COSMETIC COMPOSITIONS AND )  
PROCESSES COMPRISING )  
THEM )

Commissioner for Patents  
P.O. Box 1450  
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DECLARATION UNDER 37 C.F.R. § 1.132

I, Bertrand Lion, declare and state that:

1. I am a French citizen, residing at 10 – 12 rue de Fécamp 75012 PARIS - FRANCE.
2. I have been awarded a degree in Chemistry (Master) from the University of Pierre et Marie Curie (Paris VI).
3. I have been employed by L'ORÉAL since 1989 and I am presently a senior researcher of the Advanced Research (Materials Sciences) at L'ORÉAL. During my employment at L'ORÉAL, I have been engaged in research and development regarding polymers (synthesis, processing, properties)..

4. Given my education and experience, particularly in the area of polymers synthesis and properties, I consider myself able to provide the following testimony based on experiments conducted by me or under my direct supervision.

#### TESTING

5. The oil resistance of a polymer according to the claimed invention (50% to 90% of at least one first block having a  $T_g \geq 40^\circ\text{C}$  and 5% to 45% of at least one second block having a  $T_g \leq 20^\circ\text{C}$ ) and a comparative polymer is quantified by measuring stickiness.

6. A polymer according to the claimed invention, as well as a comparative polymer, were prepared according to the procedures of Examples 8 and 9 of the present application.

7. The polymer according to the claimed invention contained 70% of a first block polymer (mixture of 50% isobornyl acrylate and 50% isobornyl methacrylate) with a  $T_g$  of  $10^\circ\text{C}$  and 30% of a second block polymer (isobutyl acrylate) with a  $T_g$  of  $-24^\circ\text{C}$ .

8. The comparative polymer contained 30% of a first block polymer (mixture of 50% isobornyl acrylate and 50% isobornyl methacrylate) with a  $T_g$  of  $102^\circ\text{C}$  and 70% of a second block polymer (isobutyl acrylate) with a  $T_g$  of  $-24^\circ\text{C}$ .

9. The oil resistance of the polymers was determined using a drop of olive oil placed on a dry polymer film. A polymer film was prepared from a 20% solution of polymer in isododecane. 0.5 ml of the solution was spread on a glass plate with dimensions of 2.5 x 7.5 cm and left to dry at room temperature ( $25^\circ\text{C}$ ) for 24 hours. One ml of olive oil was then spread on the polymer film. After 15 minutes, 30 minutes,

1 hour, 2 hours and 48 hours, the excess oil is wiped from the film and the stickiness was assessed by touch and compared with the comparative polymer.

10. A mark of "3" was given when the plate was lifted off with the finger (i.e., very sticky). A mark of "0" signifies that no stickiness was detected. The results are shown in Table 1 below.

### RESULTS

TABLE 1

	15 minutes	30 minutes	1 hour	2 hours	24 hours
Invention	0	0	1	1	1
Comparative	3	3	3	3	3

11. The stickiness reflects the sensitivity of the polymer to olive oil. The stickier the polymer is in the presence of oil, the more sensitive it is to the oil, and, therefore, the deposit will be affected more easily, for example, during a meal (in the presence of oil in foods) or by sebum. As a result, the polymer is retained less well on the skin. This also leads to decreased comfort; the stickier the film, the more uncomfortable the composition is when it is being worn.

### CONCLUSION

12. The results of this testing, shown in Table 1, illustrate that the claimed composition, which contains an amount of 50% to 90% by weight of at least one first block polymer with a Tg greater than or equal to 40°C and 5% to 45% by weight of at least one second block with a Tg greater than or equal to 20°C, has significantly better oil resistance quantified by stickiness relative to the prior art.

13. Based on my education and experience, it would have been unexpected that a composition containing an amount of 50% to 90% by weight of at least one first block polymer with a  $T_g$  greater than or equal to 40°C and 5% to 45% by weight of at least one second block with a  $T_g$  greater than or equal to 20°C would significantly improve oil resistance.

14. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date:

December 17, 2007

By:

Bertrand Lian  
[NAME]